



# De-Icer

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830  
Issue date: 27-9-2018 Revision date: 6-2-2020 Supersedes: 10-7-2019 Version: 1.4

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Mixture  
Trade name : De-Icer  
Product code : 10.20.02  
Product group : Trade product

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

##### 1.2.1. Relevant identified uses

Intended for general public  
Main use category : Industrial use, Professional use, Consumer use  
Use of the substance/mixture : Use in de-icing and anti-icing fluids

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

Kroon Oil BV  
Dollegoorweg 15  
7602 EC Almelo - Netherlands  
T 0031 (0)546 81 81 65  
[vib@kroon-oil.nl](mailto:vib@kroon-oil.nl)

#### 1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
United Kingdom	National Poisons Information Service (Cardiff Centre) Gwenwyn Ward, Llandough Hospital	Penarth CF64 2XX Cardiff	0344 892 0111	

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, Category 3 H226  
Serious eye damage/eye irritation, Category 2 H319  
Full text of H statements : see section 16

##### Adverse physicochemical, human health and environmental effects

Flammable liquid and vapour. Causes serious eye irritation.

#### 2.2. Label elements

##### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



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	GHS02	GHS07
Signal word (CLP)	: Warning	
Hazard statements (CLP)	: H226 - Flammable liquid and vapour. H319 - Causes serious eye irritation.	
Precautionary statements (CLP)	: P101 - If medical advice is needed, have product container or label at hand. P102 - Keep out of reach of children. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P264 - Wash hands thoroughly after handling. P280 - Wear protective gloves, protective clothing, eye protection. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 - If eye irritation persists: Get medical advice/attention. P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.	

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Ethanol	(CAS-No.) 64-17-5 (EC-No.) 200-578-6 (EC Index-No.) 603-002-00-5	50 – 80	Flam. Liq. 2, H225 Eye Irrit. 2, H319
1,2-ethanediol	(CAS-No.) 107-21-1 (EC-No.) 203-473-3 (EC Index-No.) 603-027-00-1 (REACH-no) 01-2119456816-28	2,5 – 10	Acute Tox. 4 (Oral), H302 STOT RE 2, H373

Full text of H-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Rinse skin with water/shower. Take off immediately all contaminated clothing.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation	: Inhalation may affect the nervous system causing headache, possibly dizziness, nausea, weakness, loss of coordination and unconsciousness.
Symptoms/effects after eye contact	: Eye irritation.
Symptoms/effects after ingestion	: Ingestion may cause nausea, vomiting and diarrhea.

### 4.3. Indication of any immediate medical attention and special treatment needed

Seek urgent medical help. Treat symptomatically.

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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.  
Unsuitable extinguishing media : Do not use a heavy water stream.

#### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable liquid and vapour.  
Hazardous decomposition products in case of fire : Incomplete combustion releases dangerous carbon monoxide, carbon dioxide and other toxic gases.

#### 5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

Protective equipment : Wear suitable protective clothing. Concerning personal protective equipment to use, see section 8.  
Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes.

##### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

#### 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.  
Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Avoid contact with skin and eyes.  
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

#### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment.  
Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed.

#### 7.3. Specific end use(s)

No additional information available

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### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

Ethanol (64-17-5)	
United Kingdom - Occupational Exposure Limits	
Local name	Ethanol
WEL TWA (mg/m <sup>3</sup> )	1920 mg/m <sup>3</sup>
WEL TWA (ppm)	1000 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

1,2-ethanediol (107-21-1)	
EU - Occupational Exposure Limits	
Local name	Ethylene glycol
IOELV TWA (mg/m <sup>3</sup> )	52 mg/m <sup>3</sup>
IOELV TWA (ppm)	20 ppm
IOELV STEL (mg/m <sup>3</sup> )	104 mg/m <sup>3</sup>
IOELV STEL (ppm)	40 ppm
Notes	Skin
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
United Kingdom - Occupational Exposure Limits	
Local name	Ethane-1,2-diol
WEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> particulate 52 mg/m <sup>3</sup> vapour
WEL TWA (ppm)	20 ppm vapour
WEL STEL (mg/m <sup>3</sup> )	104 mg/m <sup>3</sup> vapour
WEL STEL (ppm)	40 ppm vapour
Remark (WEL)	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

#### 8.2. Exposure controls

##### Appropriate engineering controls:

Ensure good ventilation of the work station.

##### Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:					
Chemical resistant gloves (according to European standard NF EN 374 or equivalent). Time of penetration is to be checked with the glove producer					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Reusable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	≥ 0.35		EN ISO 374

Eye protection:
Safety glasses with side shields. (EN 166). Safety glasses

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Type	Use	Characteristics	Standard
Safety glasses	Droplet	clear	EN 166

### Skin and body protection:

Wear suitable protective clothing

### Respiratory protection:

No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation. Air-fed respiratory protective equipment should be worn when this product is sprayed if the exposure of the sprayer or other people nearby cannot be controlled to below the occupational exposure limit. Approved organic vapour respirator

### Personal protective equipment symbol(s):



### Environmental exposure controls:

Avoid release to the environment.

### Other information:

Provide local exhaust or general room ventilation to minimize mist and/or vapour concentrations. Do not eat, drink or smoke during use. Always wash hands after handling the product.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Blue.
Odour	: citrus.
Odour threshold	: No data available
pH	: 6,5 – 9,5
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: 84 °C
Flash point	: 23 °C
Auto-ignition temperature	: 400 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: 4446 Pa (20°C)
Vapour pressure at 50 °C	: 214,92 hPa
Relative vapour density at 20 °C	: No data available
Relative density	: 0,851
Density	: 886 kg/m <sup>3</sup> at 20 °C
Solubility	: Water: Soluble
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Lower explosive limit (LEL)	: 3,4 vol %
Upper explosive limit (UEL)	: 19 vol %

### 9.2. Other information

No additional information available

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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Stable under normal conditions. Flammable liquid and vapour.

#### 10.2. Chemical stability

Stable at ambient temperature and under normal conditions of use. During handling at high temperatures : In the presence of water, forms corrosive solutions.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

Hygroscopic product. Prevent moisture contact. Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

#### 10.5. Incompatible materials

Strong oxidizing agents.

#### 10.6. Hazardous decomposition products

When heated to decomposition, emits dangerous fumes. Carbon oxides (CO, CO<sub>2</sub>).

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified  
Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Not classified

#### Ethanol (64-17-5)

LD50 oral rat	15010 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 14450 - 15560
LD50 oral	8300 mg/kg bodyweight Animal: mouse

#### 1,2-ethanediol (107-21-1)

LD50 oral rat	7712 mg/kg bodyweight Animal: rat
LD50 dermal	3500 mg/kg bodyweight mouse
LC50 inhalation rat (mg/l)	> 2,5 mg/l

Skin corrosion/irritation : Not classified  
pH: 6,5 – 9,5  
Serious eye damage/irritation : Causes serious eye irritation.  
pH: 6,5 – 9,5  
Respiratory or skin sensitisation : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Not classified

#### 1,2-ethanediol (107-21-1)

NOAEL (chronic, oral, animal/male, 2 years)	1500 mg/kg bodyweight Animal: mouse, Animal sex: male, Remarks on results: other:Effect type: carcinogenicity (migrated information)
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Reproductive toxicity : Not classified  
STOT-single exposure : Not classified

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STOT-repeated exposure : Not classified

Ethanol (64-17-5)	
NOAEL (subchronic, oral, animal/male, 90 days)	< 9700 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents)
NOAEL (subchronic, oral, animal/female, 90 days)	> 9400 mg/kg bodyweight Animal: mouse, Animal sex: female, Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents)

Aspiration hazard : Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

Ethanol (64-17-5)	
LC50 fish	14,2 g/l Test organisms (species): Pimephales promelas
NOEC (chronic)	9,6 mg/l Test organisms (species): Daphnia magna Duration: '9 d'

1,2-ethanediol (107-21-1)	
LC50 fish	72860 mg/l Test organisms (species): Pimephales promelas
EC50 Daphnia	> 100 mg/l Test organisms (species): Daphnia magna
EC50 96h algae (1)	3536 mg/l Test organisms (species): other:greenn algae
EC50 96h algae (2)	6500 – 13000 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
NOEC (chronic)	≥ 1000 mg/l Test organisms (species): Americamysis bahia (previous name: Mysidopsis bahia) Duration: '23 d'

### 12.2. Persistence and degradability

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Persistence and degradability	Biodegradable.

1,2-ethanediol (107-21-1)	
Biodegradation	90 % > 10d (OECD 301A method)

### 12.3. Bioaccumulative potential

1,2-ethanediol (107-21-1)	
Partition coefficient n-octanol/water (Log Kow)	-1,36

### 12.4. Mobility in soil

1,2-ethanediol (107-21-1)	
Partition coefficient n-octanol/water (Log Koc)	1

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### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

No additional information available






## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.  
Additional information : Flammable vapours may accumulate in the container.  
European List of Waste (LoW) code : 16 05 08\* - discarded organic chemicals consisting of or containing dangerous substances

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number</b>				
UN 1987	UN 1987	UN 1987	UN 1987	UN 1987
<b>14.2. UN proper shipping name</b>				
ALCOHOLS, N.O.S. (Ethanol)	ALCOHOLS, N.O.S. (Ethanol)	Alcohols, n.o.s. (Ethanol)	ALCOHOLS, N.O.S. (Ethanol)	ALCOHOLS, N.O.S. (Ethanol)
<b>Transport document description</b>				
UN 1987 ALCOHOLS, N.O.S. (Ethanol), 3, III, (D/E)	UN 1987 ALCOHOLS, N.O.S. (Ethanol), 3, III (23°C c.c.)	UN 1987 Alcohols, n.o.s. (Ethanol), 3, III	UN 1987 ALCOHOLS, N.O.S. (Ethanol), 3, III	UN 1987 ALCOHOLS, N.O.S. (Ethanol), 3, III
<b>14.3. Transport hazard class(es)</b>				
3	3	3	3	3
				
<b>14.4. Packing group</b>				
III	III	III	III	III
<b>14.5. Environmental hazards</b>				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available				

### 14.6. Special precautions for user

#### Overland transport

Classification code (ADR) : F1  
Special provisions (ADR) : 274, 601  
Limited quantities (ADR) : 5I  
Excepted quantities (ADR) : E1  
Packing instructions (ADR) : P001, IBC03, LP01, R001  
Mixed packing provisions (ADR) : MP19  
Portable tank and bulk container instructions (ADR) : T4

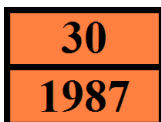


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Portable tank and bulk container special provisions (ADR) : TP1, TP29  
Tank code (ADR) : LGBF  
Vehicle for tank carriage : FL  
Transport category (ADR) : 3  
Special provisions for carriage - Packages (ADR) : V12  
Special provisions for carriage - Operation (ADR) : S2  
Hazard identification number (Kemler No.) : 30  
Orange plates :



Tunnel restriction code (ADR) : D/E  
EAC code : •3YE

### Transport by sea

Special provisions (IMDG) : 223, 274  
Packing instructions (IMDG) : P001, LP01  
IBC packing instructions (IMDG) : IBC03  
Tank instructions (IMDG) : T4  
Tank special provisions (IMDG) : TP1, TP29  
EmS-No. (Fire) : F-E  
EmS-No. (Spillage) : S-D  
Stowage category (IMDG) : A  
Flash point (IMDG) : 23°C c.c.

### Air transport

PCA Excepted quantities (IATA) : E1  
PCA Limited quantities (IATA) : Y344  
PCA limited quantity max net quantity (IATA) : 10L  
PCA packing instructions (IATA) : 355  
PCA max net quantity (IATA) : 60L  
CAO packing instructions (IATA) : 366  
CAO max net quantity (IATA) : 220L  
Special provisions (IATA) : A3, A180  
ERG code (IATA) : 3L

### Inland waterway transport

Classification code (ADN) : F1  
Special provisions (ADN) : 274, 601  
Limited quantities (ADN) : 5 L  
Excepted quantities (ADN) : E1  
Carriage permitted (ADN) : T  
Equipment required (ADN) : PP, EX, A  
Ventilation (ADN) : VE01  
Number of blue cones/lights (ADN) : 0

### Rail transport

Classification code (RID) : F1  
Special provisions (RID) : 274, 601  
Excepted quantities (RID) : E1  
Packing instructions (RID) : P001, IBC03, LP01, R001  
Mixed packing provisions (RID) : MP19  
Portable tank and bulk container instructions (RID) : T4  
Portable tank and bulk container special provisions (RID) : TP1, TP29  
Tank codes for RID tanks (RID) : LGBF  
Transport category (RID) : 3  
Special provisions for carriage – Packages (RID) : W12  
Colis express (express parcels) (RID) : CE4  
Hazard identification number (RID) : 30

### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

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### SECTION 15: Regulatory information

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

##### 15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

##### Directive 2012/18/EU (SEVESO III)

Seveso III Part I (Categories of dangerous substances)	Qualifying quantity (tonnes)	
	Lower-tier	Upper-tier
P5c FLAMMABLE LIQUIDS Flammable liquids, Categories 2 or 3 not covered by P5a and P5b	5000	50000

##### 15.1.2. National regulations

Ensure all national/local regulations are observed

#### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

### SECTION 16: Other information

Indication of changes:			
Section	Changed item	Change	Comments
2.2	Precautionary statements (CLP)	Modified	
4.1	First-aid measures after skin contact	Modified	
4.1	First-aid measures after eye contact	Modified	

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LD50	Median lethal dose
LC50	Median lethal concentration

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LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
STP	Sewage treatment plant
TLM	Median Tolerance Limit
SDS	Safety Data Sheet
vPvB	Very Persistent and Very Bioaccumulative

Training advice : Not to be used for any purpose other than the one the product was designed for.

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H373	May cause damage to organs through prolonged or repeated exposure.

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.